#### **REMARKS**

Claims 2-10, 27-31 and 33-37 are pending and under examination in the above-identified application. Applicants have reviewed the rejections set forth in the Office Action mailed November 19, 2004, and the Advisory Action mailed May 10, 2005, and respectfully traverse all grounds for the reasons that follow.

#### **Advisory Action**

Responsive to the Advisory Action mailed May 5, 2005, Applicants respectfully request that the previous Response be entered into the record and reconsidered in light of the following remarks.

## Regarding Formalities

The Advisory Action indicates that the amendments submitted on April 22, 2005, fail to comply with 37 C.F.R. § 1.121 allegedly because each claim has not been provided with the proper status identifier.

Applicants have revised the status identifier for claim 37 above to correctly show that it was previously pending. Applicants have carefully reviewed the status of the claims filed in the Response mailed April 22, 2005, and can find no further informalities. All claims are listed and contain an appropriate status identifier. If the Office is aware of any claims that fail to comply with § 1.121, Applicants would appreciate that these claims and any formal defects be specifically pointed out so that they can be corrected. Therefore, entry of the above current status of the claims is respectfully requested.

## Regarding Pools of Oligonucleotides

In paragraph 11.A of the Advisory Action, the Office alleges that "Applicants assertion that Holmes does not teach diverse oligonucleotides is not supported by the facts." The Office's further remarks in this paragraph and refusal to withdraw the rejection appear to be based on the premise that Holmes et al. describes diverse oligonucleotides and the Office's understanding that Applicants have argued that Holmes et al. does not describe such an embodiment.

Applicants respectfully submit that the Office's apparent understanding differs from what Applicants have attempted to explain. Applicants previous response did not state that Holmes et al. does not teach a diverse population. Rather, Applicants argued that Holmes et al. does not teach or suggest generating pools of different oligonucleotides. The omission of the word "pools" in the Advisory Action, and the apparent difference in understanding by the Office, is relevant and should be given proper consideration by the Office. Holmes et al. neither teach or suggest the generation of a pool of different oligonucleotides.

Regarding the other assertions in paragraph A, the Office alleges that Applicants argue only one passage cited in Holmes by the Office and cites to col. 2, lines 1-7 and col. 10, lines 15-25. Applicants respectfully point out that the relevant element being argued as neither taught nor suggested by the cited art recites, in part:

[R]eleasing said first and second oligonucleotides from said substrate thereby generating a pool of oligonucleotides comprising said first and second different oligonucleotides.

Claim 27, step (b).

The rejection carefully sets out at paragraph 6B) only two passages in Holmes et al. as relevant to generating a <u>pool</u> of oligonucleotides. These passages are "col. 6, lines 36, 37; col. 12, lines 6- 16," both of which Applicant has addressed. Therefore, the assertion that Applicants have "chose to take only one of the cited passages which were supporting of cleaving oligonucleotides from beads, and omitted passages which were cited in support of teaching of different oligonucleotides, i.e. col. 2, lines 1-7 and column 10, lines 15-25" also appears to differ from Applicant's understanding because the above passages were not cited with respect to claim 2, step (b), nor do they teach or suggest release of oligonucleotides to generate a pool as is claimed by Applicants.

Further, Applicants specifically addressed the passages relating to diverse populations of polymers, and the Office has acknowledged this fact by quoting Applicants' statement in the Advisory Action. However, the response to Applicants statements appear to be a cursory conclusion that fails to address the issue. The Office states that the "rationale for performing a step is not taken into account" and concludes that "[a]s long as the steps disclosed by [the] prior

art are the same as steps claimed, the reference anticipates the step." The quoted passage in the Advisory Action clearly states that "there is <u>no showing of record</u> or rationale described in Holmes for releasing a mixture of oligonucleotides from an array precisely assembled . . . just to thereafter combine them into a pool of mixed oligonucleotide species." Emphasis Added.

Therefore, in contrast the assertions in the Advisory Action, the point made and supported in Applicants' response is that <u>not all steps of the claimed invention</u> are described in Holmes et al. Applicant has shown that Holmes et al. does not teach or suggest the step of generating pools of different oligonucleotides. Hence, the Office's rebuttal based on lack of a rationale fails to address the remarks of record. Therefore, Applicants have clearly and completely addressed all the points raised by the Office and shown that Holmes et al. fails to teach or suggest the claimed element for which it is applied.

# Regarding Teaching Away

In paragraph 11.B of the Advisory Action, the Office reiterates that non-preferred embodiments constitute prior art. Applicants have never contested this issue. Rather, Applicants have applied the law that a teaching away in the cited art is sufficient to rebut an assertion of obviousness.

The Office further alleges that Applicants argument is based on the assumption that the claimed first and second oligonucleotides are released simultaneously from the support, but that this requirement is not a limitation in the claims.

Applicants respectfully disagree. Applicants' have stated only that Holmes et al. and Beattie fail to teach or suggest a released pool of different oligonucleotides. Applicants respectfully invite the Examiner to distinctly point out where in Applicants' previous response that it was stated, express or implied, that the first and second oligonucleotides are require simultaneous release. Rather, simultaneous release is just one mode of generating the claimed pools of different oligonucleotides.

## Regarding Lack of Motivation

In paragraph 11.C of the Advisory Action, the Office similarly appears to dismiss Applicants remarks based on an assumed requirement for simultaneous release of first and second oligonucleotides. As stated above, Applicants have argued that the cited art fails to teach or suggest generation of pools of different oligonucleotides. Therefore, the Office has not offered any reason or evidence why Beattie would be operational based on Applicants' previous remarks.

In light of the remarks above, Applicants maintain that the claimed invention is unobvious over Holmes in view of Beattie because the cited combination fails to teach, suggest or provide any motivation to arrive at the invention as claimed. Accordingly, Applicants respectfully request that this ground of rejection be withdrawn.

#### CONCLUSION

Applicant submits that the claims are in condition for allowance and respectfully request a notice to this effect. Should the Examiner have any questions, she is invited to call the undersigned attorney.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 502624 and please credit any excess fees to such deposit account.

Respectfully submitted,

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